# DAYLIGHT

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**“Is not this the carpenter’s son?”** [Mt 13:55; Mk. 6:3]

The people of Nazareth were ‘scandalized’ by Christ’s ‘wisdom and miracles’ as they knew Him as being ‘only a carpenter’ [*faber* (L.), τεϰτων (Gk.)]. But the craft of cutting, shaping and joining of wood is highly skilled, and was employed in constructing the Ark of Noah (so saving mankind), the Ark of the Covenant, and the Temple. Much later, workers in wood were essential in building the churches and cathedrals we can still admire today. Carpenters need to learn many skills, including recognition of timbers and knowledge of their properties and uses. Just as such constructions could not appear by chance, the great variety of woods were surely also designed and created.

*Picture: Wikipedia—Creative Commons*

**Daylight** **Number 68** **May 2021**

# CONTENTS

| | | |
|---|---|---|
| "Is not this the carpenter's son?" | | front cover |
| Editorial – new books on vaccines & humanism; Daphne McLeod RIP | | 1 |
| Woods – evidence of the Master Designer | *Anthony Nevard* | 3 |
| Vaccination and the Evolutionary Paradigm | *Pamela Acker* | 10 |
| Abbot Mendel: a New Outlook in Heredity (Pt II) | *James Walsh* | 20 |
| The Influence of Evolution on Nazism and Communism | *Gerard Keane* | 29 |
| *The Science, Morality and Safety of Vaccines* – details & ordering | | 36 |
| St Joseph's Staircase | | inside back cover |
| Tree Rings and Dating | | back cover |

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# EDITORIAL

Greetings to all our supporters and new readers! This issue has been held back one month to enable the inclusion of an extract from a timely new book by biology researcher and teacher Pamela Acker on the subject of **vaccines**. She is on the advisory panel of the Kolbe Center and contributed to the *Foundations Restored* DVD set we described in *Daylight 65* [April 2020]. We are very grateful for her permission to include here the section on the relationship between immunity, vaccines and evolutionism. This follows on well from the articles by Philip Byron on immunity [*DL63*] and my own on viruses [*DL 65*] and the appendix [*DL67*]. More details on obtaining the original book from the Kolbe Center precede the extract, and an A5-format version can be obtained from Family Life International [see p 36]

**"Intellectual Combat: Resistance to Religious Atheism"**

This is the title of a new 77-page book on Humanism by Thomas L. McFadden, published by the *Institute for Science and Catholicism*. From the Preface:

> The purpose of this book is to explain the origin and belief system of Humanism and the social/political agenda that Humanists have imposed on Christians. Humanism is not just an ideology but a religion, and must be opposed as a religion and not just politically with vague terms such as "conservative" and "progressive."

The book is available from Amazon but Tom has very generously permitted us to circulate it among our readers in PDF format – please send me your email address if you would like this.

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To inform Catholics and others of the scientific evidence supporting Special Creation as opposed to Evolution, and to show that the true discoveries of Science are in conformity with Catholic doctrines on Origins.

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## In praise of Carpenters

The focus of my article in this issue is the wonders of wood. Trees referred to in the Bible and used for their timber include acacia (setim), cedar, cypress, olive, pine and oak. The word ‘carpenter’ is derived via Old French from the Latin *carpentarius* [*artifex*], a carriage maker. (Middle English and Scots gave us the word ‘wright,’ as in ‘wheelwright’ and ‘cartwright.’) Carpenters may specialise as cabinetmakers, coopers (barrel-makers), framers (of the framework of buildings, joiners, luthiers (for stringed instruments), scenic builders (for performance arts sets), shipwrights, and timber conservation and restoration work. These are highly skilled trades and crafts meriting much respect. There are thousands of different timbers available worldwide from the local indigenous trees and imported types. It was fitting that Our Lord and His foster-father, St Joseph, should have been skilled in working this material which so marvellously displays the power and goodness of its Creator.

## Daphne McLeod RIP

We were very sorry to read of the death of Daphne McLeod on January 3rd 2021. She had supported Daylight since 1992. Mrs. McLeod was once a pupil of the eminent lay theologian Frank Sheed (author of *Theology and Sanity*) when she was a member of the Catholic Evidence Guild in London in the 1940s. Daphne gave her life to teaching catechism as a religion teacher, a public speaker, and an activist for the return of Catholic tradition, especially through her role as Chairman of *Pro Ecclesia et Pontifice* [PEEP].

Daphne McLeod chairing a talk by Gerard Keane at St James’s, Spanish Place, London, August 1994

You can read more of Daphne’s life and work at this website: https://catholictruthblog.com/

Access online to Daphne’s 16 x 30min audio course on the Catechism is available at https://fsspx.asia/en/cat-ex .

A version for adults: ‘What We Catholics Believe’ can be found at https://www.proecc.com/dmaudio

## And finally…

Please let us know of any change in your address. Your renewed subscription should be indicated by a revised renewal number on your next address label. Please send me an email or post a s.a.e. if you require specific acknowledgment. Many thanks! *Ed.*

# Woods – evidence of the Master Designer

## Anthony Nevard

Of all the natural materials with which everyone must come into daily contact, wood is probably the most familiar to both child and adult. There are woodworking enthusiasts and collectors of antique furniture who are well able to describe the characteristics and properties of hardwoods and softwoods, and can distinguish plane from poplar, walnut from yew. Some may have benefited from taking Design Technology at GCSE, having studied the features and applications of oak, mahogany, beech, ash and pine; but if they only studied Biology at GCSE or A-level, they will most likely have been taught little or nothing about the structure or formation of this essential plant product. [1] The sheer variety of timbers in the world is itself astonishing, but the real marvel is the biological process by which wood is actually made. For evolutionists to ascribe these wonders to materialistic processes of natural selection and mutations really beggars belief. This brief outline is intended to illustrate, quoting the words of the old song, why 'only God can make a tree.'[2]

### Plant cells and tissues

The plant cell, like an animal cell, typically, includes living *cytoplasm* and a control centre (*nucleus*), surrounded by an active barrier, the *cell membrane*. Unlike animal cells, the plant cell develops a transparent external wall mainly of the polysaccharide *cellulose*, penetrated by fine cytoplasmic connections called *plasmodesmata* that maintain communication between neighbouring cells. During cell enlargement from the apical growth region, tiny fluid-filled vacuoles usually coalesce to form a single *vacuole* that may occupy 90% of the total cell volume, with the cytoplasm forming a thin lining against the cell wall. The contents of the vacuole are controlled by its membrane, the *tonoplast*. The fluid within is known as *cell sap*.

In most multicellular plants there is a 'division of labour' between different parts and a separation of functions – this requires the development of highly specialised types of cell, for example root hairs for the absorption of water and minerals, guard cells to control the opening of stomata in the leaf for gas exchange with the air, and vessels, making up much of the wood, to conduct water and contribute to the support of the plant. Despite their differences in form, these cells all derived from apical cells that were initially very similar. According to Lowson's popular botany textbook:

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[1] It is of concern to botanists that in the UK it has been ten years since any degree course in Botany has been available at a British University. It seems biology courses rarely offer modules on systematics or plant anatomy, unlike what was expected in A-levels in the 1960s.
A study of this matter can be read at https://www.tandfonline.com/doi/full/10.3108/beej.17.2

[2] We note here that our distinguished supporter Professor Maciej Giertych obtained his MA in forestry from Oxford University (1958) and worked in the Polish Academy of Sciences *Institute of Dendrology* (1962-2006), mainly in the field of population genetics of forest trees.

> "This development of dissimilar, specialised types of cell from newly-formed cells of uniform appearance is the process of differentiation. Regular differentiation into the complex pattern of cell types which make up a higher plant, in such a way that the whole is an integrated and functioning organism, is one of the marvels of the natural world." [3]

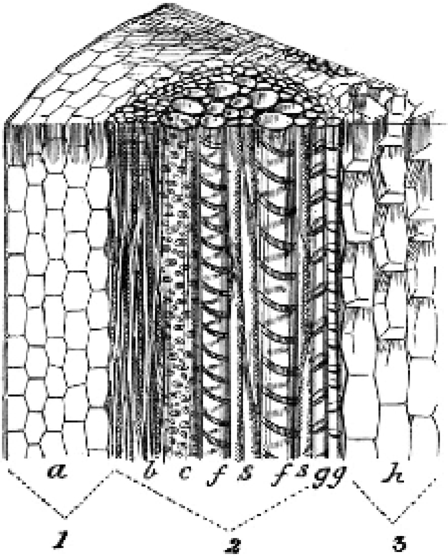

Fig. 63.—Portion of stem of Italian Reed (Diagrammatic). 1. Outer covering of the stem or integument. 2. Fibro-vascular bundle. 3. Medulla or pith. (a) Tissue of cells (parenchyma); (b) Bast-fibres; (c) Pitted vessel; (f) Spiral vessels; (g) Annular vessels; (h) Soft loose cells of pith; (s) Sieve-tubes or bast-vessels.

Groups of usually similar cells massed together form what are called tissues. We shall focus on those primarily related to the development of wood. They depend on the property of plant protoplasm (both in flowering plants and many non-flowering ones) not only to build a primary wall for the cell but of spreading on the interior of that wall new layers of material (secondary deposit). In woody tissues this includes the substance *lignin*, and the process is called lignification. (Lat, *lignum* = wood). This material also forms in the walls of 'stone cells' (sclereids), as found in nuts and stone fruits, and also in pears. Another secondary deposit is *suberin*, providing cork cells with resistance to water evaporation. A Spanish species of oak (*Quercus suber*) supplies us with the cork of commerce. The diagram [4] shows other forms of lignified cells: spindle-like fibres *(b)*, vessels in which the walls between columns of cells have broken down which may display pitted walls *(c)*, spiral thickening *(f)*, and annular (ringed thickening) vessels *(g)*. These vessels of the *xylem* serve for transport of water and mineral salts, as well as physical support. The sieve tubes *(s)* of the *phloem* are usually not lignified but communicate in columns via ‘sieve plates’ to facilitate translocation of food materials (e.g. sucrose). The system of xylem and phloem form the *vascular bundles* that connect up with the veins in the branches, leaf and flower stalks, and leaves.

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[3] Simon, Dormer & Hartshorne, *Lowson's Textbook of Botany*, University Tutorial Press, London, 14th Edn. (1966), p.28.

[4] Knight & Step, *The Living Plant*, Hutchinson & Co., (1905), p.50.

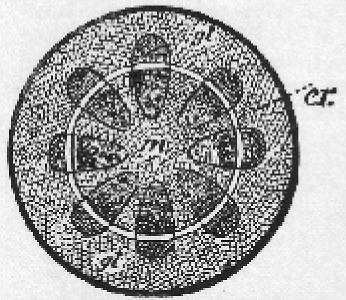
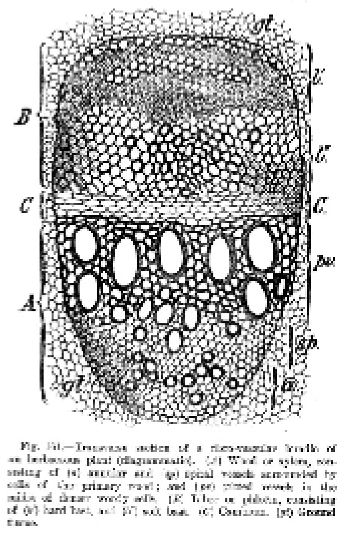


Fig. 162. Transverse section of a dicotyledonous stem (diagrammatic). The eight fibro-vascular bundles are seen embedded in the ground tissue (gt). (m) Medulla or pith. (cr) Cambium ring.

Young dicot stem (TS) showing
8 vascular bundles

## Vascular tissues

The substance of wood is very largely composed of dead vascular material, which can be found in both roots and stems. For brevity here, we shall focus on stems, which bear the leaves, flowers and fruits. In the young stem of a dicotyledonous plant shown here,[5] we might compare the arrangement of the fibro-vascular bundles with that of a candle, furnished with perhaps eight wicks instead of one, arranged in a circle equidistantly spaced apart. In this cross-sectional diagram[6] of a single bundle, the narrow end *(A)* would be directed towards the centre or *pith*, and the wider end *(B)* nearest to the bark. *A* is the xylem (primary wood) containing vessels and fibres with lignified walls. *B* is the phloem, including the living sieve tubes and their ‘companion cells,’ with an outer zone of thickened ‘bast fibres.’ The cylindrical arrangement of bundles of fibres, tapering and overlapping at their ends, provides great mechanical efficiency of support and resistance to bending and stretching.[7] In addition, many of the cells



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[5] Diagram from *The Living Plant*, p. 144

[6] Diagram *Ibid.*, p. 143

[7] The length and strength of these strands make for their value in the textile industry. Linen thread comes from the phloem fibres of flax (*Linum usitatissimum*); hemp (*Cannabis sativa*) and jute (*Corchorus capsularis*) are used for cordage, sacking, and making other cheap but strong fabrics.

have a hexagonal cross-section, which is well known to provide strength with economy (e.g. in the honeycomb pattern). The fibres and vessels themselves are effectively lignified cylinders.

## Secondary thickening

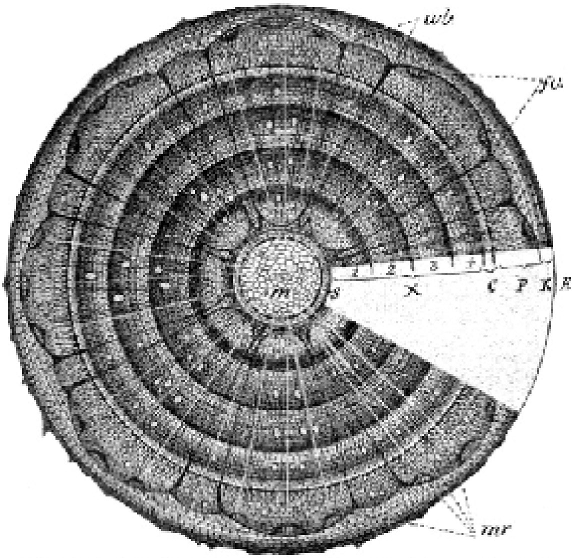

Fig. 100a.—Transverse section of a four-year-old dicotyledonous stem (diagrammatic). (m) Medulla or pith. (mr) Medullary rays. (s) Medullary sheath. (X) Xylem (wood). (P) Bast or phloem. (C) Cambium ring. (K) Cortex. (E) Epidermis. The eight fibro-vascular bundles (fv) are united by wood and bast (wb) formed by the cambium between the bundles. The figures 1, 2, 3, 4, refer to the years of growth of the wood.

If it were possible for the wicks in our candle analogy to increase continually in thickness, they would eventually meet and form an unbroken circle round the innermost core of the wax. This is just what happens with the woody bundles in the stems of dicotyledonous trees, aided by the formation of new bundles between the existing ones. This secondary growth is dependent on the activity of the layer of soft, thin-walled cells named *cambium (C)* that divide the bundle between the inner xylem and the outer phloem. This forms an unbroken ring uniting the woody bundles, with the portions between them being known as *interfascicular cambium*. Though the inner pith of the stem appears locked in, communication is maintained through to the bark by narrow radial extensions of the pith called *medullary rays (mr)*. These can be clearly seen in the diagram of the four-year-old dicotyledonous stem.[8] The eight original fibro-vascular bundles *(fv)* can be distinguished, united by wood and bast *(wb)* formed by the interfascicular cambium between them. The whole system of the stem structure is, in reality, just part of a dynamic three-dimensional living organism, but even in two-dimensions we see order, purpose and perfection in microscopic detail. Everything about the stem structure shouts out ‘intelligent design.’

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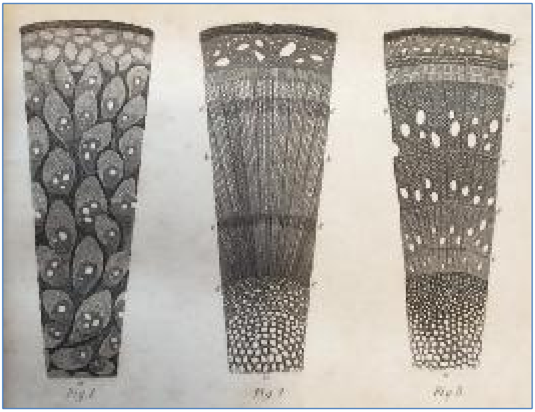
[8] Diagram from *ibid.* p.142.

## Features of wood

In temperate regions, the lower temperatures of winter cause dormancy in the cambium layer. In the spring, secondary growth restarts, and the new wood has a higher proportion of wide vessels than the more fibrous cells of the autumn. This results in a series of concentric rings which on examination of the cut trunk provide for a fairly accurate computation of the age of the tree. These are better named 'growth rings' than annual rings, as in tropical regions they are more related to alternation of wet and dry periods rather than winter and summer. The new xylem layer is permanent and rigid whereas the phloem is temporary and its older soft parts soon collapse. In many herbaceous plants, the stem resembles that of a woody plant but with a single annual ring. [9]



These diagrams illustrate:

(1) the scattered arrangement of vascular groups in the monocot stem of **sugar cane** (note the absence of a central pith);

(2) the annular layers (marked *c-c*) of concentrated fibrous tissues in the **pine** (conifer) stem, showing annual growth;

(3) the typical dicot stem of the **oak**, showing four annual rings.

There is often a conspicuous line formed between the new spring-wood and the summer-wood of the year before. The spring-wood in dicots contains a higher proportion of thin-walled and wider vessels, suited to the rapidly raised requirements of the upward transpiration stream occasioned by the opening of buds and development of the leaf canopy. Later in the summer, the new xylem includes more of the spindle-shaped thick-walled tracheids and fibres which contribute more to support the increased mass of the tree required for bearing the extra weight of the leaves, flowers and fruits. Even in conifers the summer-wood is usually a harder and heavier tissue than spring-wood, though both consist mostly of tracheids. These differences in microanatomy between dicots and conifers are associated with the terms '*hardwood*' and '*softwood*,' though there are exceptions, e.g. balsa is classified as a hardwood but is softer than a softwood; yew (a ‘softwood’) yields wood that is harder than many hardwoods. The woods of broad-leaved dicot trees may also differ in the distribution of the vessels (pores) across the annual ring. In *ring-porous* woods, like oak and chestnut, the early wood predominantly displays large pores compared with late wood, whereas in *diffuse-porous* woods, like basswood and poplar, pores are of a more even size and evenly distributed.

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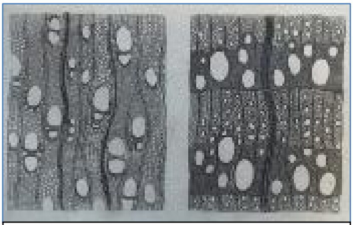
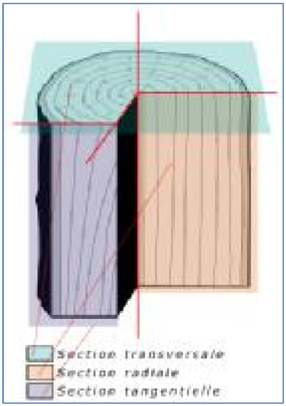
[9] Diagrams from Rhind, W., *A History of the Vegetable Kingdom*, Blackie & Son (1866), p. 24.


Oak (L) & Elm (R)

As the wood thickens, radial communication in the stem is maintained through the initiation by the cambium of new rays that do not extend to the pith. The ray cells often show heavy pitting of their walls, storage of starch grains and other products, with intercellular air spaces. Some softwoods (e.g. pine, spruce, larch, Douglas fir) include *resin canals*, which may help protect the inner parts from insect or fungus attack after injury e.g. by fire. Natural resins have long been used in the Far East in the preparation of varnishes and lacquers. Dried and hardened into amber, this has been used to fashion into jewellery, and has sometimes been found with the bodies of insects preserved within.

Young secondary xylem (or *sapwood*) is pale in colour, saturated with water and includes living cells. This allows for some ability to resist infection and heal wounds. Wood that is about ten to fifteen years old is converted to *heartwood* which is lifeless and takes on the colour and character of the species. Food reserves have disappeared and the vessels tend to become blocked. Heartwood is generally harder, drier, less permeable and more durable than sapwood, also being less attractive for wood-boring insects.



Sectional planes
*Creative commons*

The *grain* of wood refers to the patterns from the longitudinal arrangement of the fibres that arise mainly from the alternation of spring-wood and summer-wood. These will be affected by the annual rings of the branch bases buried in the trunk which form *knots*. Some trees such as elm and maple are prone to produce *burrs*, [10] large woody bosses with twigs on them. Knots and burrs can be undesirable in commercial practice but may have visual appeal for the wood carver. Timber is generally cut down the grain, and its pattern, or ‘figuring,’ will have a different appearance in a radial longitudinal section than a tangential longitudinal section. A transverse section will, of course, show the rings. The diagram should help to clarify the meaning of these different planes of cut.

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[10] Known as ‘burls’ in the US

## The wealth of woods worldwide

According to *Britannica*, woods "are produced by an estimated 25,000 to 30,000 species of plants, including herbaceous ones, though only 3,000 to 4,000 species produce wood that is suitable for use as a material." [11] Softwoods (from gymnosperms) account for about 40 percent and hardwoods (from angiosperms) about 60 percent of the world's production of lumber. [12] A wide selection can be viewed online taken from the 14-volume book *The American Woods*, published between 1888 and 1910 by the author, Romeyn Beck Hough. This includes photographs of radial, tangential, and cross-sections of 350 North American woods. [13]

The *Wood Handbook* informs us that more than 100 woods are available to the prospective user in the US, though not all would be supplied in any one area. [14] About 60 native woods are of major commercial importance, with another 30 species imported as logs, lumber or veneers. The website provides summaries of the characteristics, uses and availability of most of these woods. Suffice here to add that their applicability is related to density, hardness, flexibility, colour, grain, workability, resistance to moisture, insulating properties, durability, supply and cost. The choice is staggering – but there are thousands more species available worldwide. The multitude of uses includes building, transport, furniture, tools, sporting equipment and decorative objects, as well as fuel for cooking and heating.

Many pilgrims to the Holy Land treasure mementoes carved from olive wood from the Garden of Gethsemane. We should surely have great respect and appreciation for the wonderful material of wood, on which Our Lord worked and from which both His Crib and His Cross were made.

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[11] *Encyclopaedia Britannica* 2007 – Article on Wood

[12] In N. America, 'lumber' applies to cut timber in the process of preparation for use. In the UK, the word 'timber' is more commonly and widely used.

[13] https://www.lib.ncsu.edu/specialcollections/forestry/hough/

[14] Forest Products Laboratory. 1999. Wood handbook—Wood as an engineering material. Gen. Tech. Rep. FPL–GTR–113. Madison, WI: U.S. Department of Agriculture, Forest Service, Forest Products Laboratory. 463 p. https://www.fpl.fs.fed.us/documnts/fplgtr/fplgtr113/ch01.pdf

**Excerpt from *Vaccination*: *A Catholic Perspective*, by Pamela Acker**

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# Vaccination and the Evolutionary Paradigm

## Pamela Acker

*Again and again, faith in the truth of the evolutionary hypothesis has led scientists to see dysfunction or loss of function where there was functionality [...] This assumption of dysfunction in nature goes against the traditional presumption in favor of function that has characterized the pursuit of knowledge in medicine and natural science in the development of Western civilization.*
*Hugh Owen* [1]

If the antibody model is defunct and the induction of immunity from vaccination is seriously limited, why is this medical intervention still perceived as a realistic option for managing the immune response? One integral – and overlooked – reason is that vaccination is rooted in the modern evolutionary understanding of medicine. This worldview ultimately reduces the body to a random amalgamation of factors that can effectively be tinkered with by man, who is considered more intelligent than his random maker, natural selection. Before we discuss the specifics of vaccine safety and ethics, it is crucial to understand the foundations of evolutionary theory upon which the vaccine ideal rests.

### *The Creation-Providence Framework vs. the Evolutionary Paradigm*

From the beginning, the pioneers of vaccination focused on developing vaccines to combat or prevent specific diseases rather than striving to understand the human body's immune system or the ways that the body's natural defences could be strengthened. The preoccupation with specific diseases and with eliciting a specific response from the human body to those diseases reflects the Enlightenment philosophy of naturalism that came to dominate scientific and medical research during the late eighteenth and early nineteenth centuries. Naturalism, which excludes any kind of supernatural cause and focuses on purely natural causes, logically leads to a reductionist interpretation of natural phenomena. This, in turn, leads to practical consequences like the myopic focus on a single target molecule in the human body in order to treat disease symptoms, which is (quite unfortunately) the course of action pursued almost exclusively in modern drug development.[2] We see this reductionism in its relation to vaccination most clearly evident in the idea that antibodies could be considered equivalent to immunity.

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[1] Owen H. The negative impact of the evolutionary hypothesis on scientific research. 4 Feb 2010. https://kolbecenter.org/negative-impact-of-evolutionary-hypothesis-on-scientific-research/ Accessed 16 May 2020.

The philosophy of naturalism is incompatible with the faith of earlier natural scientists and doctors who believed in the special creation of man by an all-wise Creator. Naturalism is based upon an evolutionary view of man (or at least of man's body, in the case of those who advocated a theistic version of evolution) as the product of undirected natural processes over long periods of time. In light of this philosophy, man comes to be viewed as an "accident" – and despite his accidental nature, his attribute of intelligence becomes all-important in "fixing" whatever is wrong in the body and in the world. The idea that man can substantially improve upon nature entered into its heyday with the eugenics movement that began in the late 1800s in England. At that time, natural scientists worked to "improve" the genetics of crop plants, animals (especially dogs), and even humans, using rigorous programs of selective breeding that pushed organisms to the limits of their genetic variability.[*] While the term eugenics has since acquired negative connotations and fallen out of favour, we can still see the arrogance of this mindset in examples such as research that is being done to genetically modify our food supply in order to make it sufficiently nutritious.[3,4] This is carried out despite the wealth of research that indicates that eating a variety of foods (as God created them) is more than adequate to meet human nutritional needs, and also in spite of concerns about the safety of genetically-modified food sources.[5] We also see this idea of man "making up for what is lacking" in creation when we consider that vaccines are designed to manipulate the body in an attempt to make the immune system more robust than it would be without them.

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[2] Scapozza L. Drug Development. 2013. In: Global Health: An Interdisciplinary Overview. Coursera. https://www.coursera.org/learn/global-health-overview/lecture/6PxzP/drug-development-by-leonardo-scapozza Accessed 18 May 2020.

[*] These programs of selective breeding that aimed to produce extremely "pure" bloodlines ultimately negatively impacted the health of the populations on which they were practiced. This was through the mechanism of reducing the overall variability of the gene pool, which rendered purebred organisms susceptible to various genetic defects that were accidentally bred into them alongside the more desirable characteristics. As we will see in many of the topics covered under vaccine safety (particularly with allergies, autoimmune reactions, and the shifting susceptibility of disease), there are also unintended side effects of the equally dangerous practice of trying to "engineer" the immune system.

When evaluating the merits and demerits of vaccination, it is important to recognize that there are two different frameworks for doing scientific and medical research that have been used by notable researchers during the past few centuries. One framework is called the Creation-Providence Framework. This framework holds that Almighty God created the first human beings, Adam and Eve, instantly and without intermediate agents. They were perfect in body and mind, and free from any defect. The form of all living things is thus presumed to be stable in this framework, following the form created by God in the beginning, and all parts of God's creation are presumed to be functional, as all that God created is good. It was the Original Sin of Adam that brought death, deformity, and disease into the world, and these things were not an original part of creation; nor was death an integral part of the process by which living things were brought into being, as evolution theory supposes. Finally, sin damaged man *without destroying the essential goodness (and functionality) of the human body,* even as it is subject to death and decay.

This framework does not rest solely on a proper interpretation of Genesis, but also upon the work of one of the greatest of the Greek scientists and philosophers. In the Middle Ages, through the work of the Scholastic philosophers and theologians, the philosophy of Aristotle was thoroughly incorporated into the intellectual activity of the Church. According to Aristotle, everything in nature can be understood in terms of the four causes: material, efficient, formal, and final. These causes form an integral whole in explaining the purpose and nature of everything within living bodies.

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[3] Haslam RP, Ruiz-Lopez N, Eastmond P, et al. The modification of plant oil composition via metabolic engineering—better nutrition by design. *Plant Biotechnology Journal,* 2013; 11, p. 157–168. doi: 10.1111/pbi.12012

[4] Le DT, Chu HD, Le NQ. Improving Nutritional Quality of Plant Proteins Through Genetic Engineering. *Curr Genomics*. 2016;17(3):220□229. doi:10.2174/1389202917666160202215934 These are only a few of the many examples that could be proffered.

[5] For more information on the tragedy of GMOs being introduced into the food supply, see: Owen H. *GMO Food: Boon or Bane?*, 2013. Published by author.

The Creation-Providence framework heavily influenced such men as Francis Bacon and Sir William Harvey. Bacon is credited with developing the scientific method, which serves as the foundation for all empirical research in modern times. He definitively asserted the unity between truth in Scripture and truth in the observable world, thus maintaining the harmony between theology (the queen of the sciences) and natural science.[6] This framework also unquestionably drove Harvey in his quest to understand the circulation of the blood in the body.[7] He applied the principle that God works all things for a purpose, and that there was unity in the diversity of His designs. Harvey ultimately came to understand the circulation of the blood through analogy with other works of creation and their purpose.[8] These two men were not alone in their fruitful use of the Creation-Providence framework: this is the worldview that inspired many of the greatest minds in natural science, including Michael Faraday, James Joule, Blessed Nicholas Steno, Carolus Linnaeus, George Washington Carver, and James Clerk Maxwell.

However, with the advent of Cartesian philosophy during the so-called Enlightenment, the subject of human origins was, without good reason, reassigned from the domain of theology to natural science and this soon required viewing mankind solely in terms of material and efficient causes—things that can be weighed, measured, and quantified. This was truly tragic, for modern biologists recognize that function follows form, and they recognize the importance of understanding the structure to understand the function of living things and their organs and organ systems. This recognition implies that *specific forms are required for specific purposes*; however, modern biologists must presume that all these functional forms *do not serve a purpose* (i.e. do not have a final cause) if they follow their philosophy whole-heartedly. And it cannot truly be followed whole-heartedly, for even the most committed materialists among them fail to completely eradicate the idea of purposiveness from their language.

By embracing naturalistic uniformitarianism, adherents to what we might call the evolutionary framework no longer presume stable form and function throughout the biosphere, but instead presume flux and dysfunction. Natural scientists imbued with materialism no longer look at plants or animals as integrated, created wholes but as collections of parts, like machines, that could be cobbled together bit by bit over long ages of time. Moreover, the assembly of these living machines is held to be random and the result of genetic errors (mutations).

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[6] Morris HM. Sir Francis Bacon. 16 Feb 1998. https://answersingenesis.org/creation-scientists/profiles/sir-francis-bacon/ Accessed 18 May 2020.

[7] Bergman J. The ends justify the means – The secret of science’s success. *J Creation*, 2013; 27(1): 19-22.

[8] Ibid.

This framework, which preceded Darwin and flowed from the Cartesian philosophy of rationalism, appears to have been shared by Edward Jenner and the other pioneers of vaccination. The presumption that without vaccination the body will be unable to face the regular onslaught of pathogens in its environment (the body is randomly assembled, and so human reason must be able to "improve" upon its design and thus its function) and the idea that we could manipulate only a part of the immune system without producing possible unintended effects in the body as a whole (since the body is an arbitrary assemblage of parts that may be adjusted individually and unsystematically) are both of a piece with this evolutionary framework.

Vaccination is not the first time that naturalism has imposed itself on medicine through the impoverished evolutionary paradigm. The reductionist view of plants and animals also led to the perverse conviction that organs or features of plants, animals, or humans that had no apparent function were "useless" vestigial leftovers from an earlier stage of a long natural evolutionary process. This fits neatly within the framework of evolutionary organs, and the reductionist idea that bodies were assemblages of disconnected parts. It would prove to have several disastrous consequences.

It was originally claimed by evolutionary scientists that up to 180 organs in the human body were vestigial.[9] As this belief in vestigial organs entered the mainstream of scientific and medical training, medical researchers grew even more likely to presume flux and dysfunction in the plants, animals, and humans they studied. Worse still, in opposition to Harvey, researchers began to assume that what they did not understand was a result of random chance. Lacking a framework with final causes, they did not search for a purpose or use for that which they did not understand. As a result, medical and scientific investigation departed from the full truth about mankind and dangerous and unnecessary practices were perpetuated. It is important to give a brief history of this idea of "vestigiality," with specific examples of its impact on medical progress, to illustrate the depth and consequences of embracing the evolutionary framework as the basis for medical interventions.

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[9] *The World's Most Famous Court Trial,* second reprint edition, Bryan College, Dayton, Tennessee, 1990, p. 228.

## *Tonsils: Vestigial Organs or Vanguards of the Mucosal Immune System?*

For many decades, the tonsils were classified as vestigial organs and routinely removed unnecessarily from millions of patients. Only in the recent past were doctors and medical researchers forced to recognize that tonsils are an integral part of the human immune system[10] and that tonsil removal actually amounted to stripping patients of part of their God-given first line of immune defence. Reports from doctors during the polio epidemics of the mid-twentieth century confirmed that patients who had had their tonsils removed were far more likely than those who kept their tonsils to suffer the worst effects of the disease.[11] Long-term studies have further demonstrated that individuals who did not have their tonsils removed were comparably healthier after thirty years than those who did.[12]

It is reasonable to conclude that a large percentage (and probably the vast majority) of the tens of thousands of patients who died as a result of a tonsillectomy, as well as the hundreds of thousands who suffered complications requiring hospitalization,[13] should never have had the operation at all. But the evolutionary presumption that the tonsils were vestigial – that they developed through random natural processes and served no purpose in the human body – was also dangerous for another reason. It shifted attention away from the physiological and environmental factors responsible for the swelling of the tonsils (which in turn led to chronic infection or blocked airways) and pinned the blame for these conditions on an assumed defect in the "vestigial" tonsils themselves.

Adherence to the evolutionary hypothesis has made it more difficult for medical researchers to explore the possibility that the swelling of the tonsils in relation to the air passage might be related to problems with diet, environment, and lifestyle. These factors can result in the under-development of the bony structures that house the tonsils, and so the blocked airways may not be indicative of any kind of dysfunction in the tonsils themselves. Orthodontist Dr. Raymond Silkman notes that:

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[10] Seladi-Schulman J. Tonsils and Adenoids Overview. https://www.healthline.com/health/tonsils-and-adenoids#function (accessed 4-22-20)

[11] *Time* magazine, "Tonsils & Bulbar Polio," Monday, Apr. 12, 1954.

[12] Van Staaji B, van den Akker FH, Rovers MM, Hordijk GJ, Hoes AW, Schilder AGM. Effectiveness of adenotonsillectomy in children with mild symptoms of throat infections or adenotonsillar hypertrophy: open, randomised controlled trial. *British Medical Journal*, 2004 Sept 18: 329-651. doi:10.1136/bmj.38210.827917.7C

[13] A study of complications from tonsillectomy in England and Scotland discovered a rate of 2-5% in 2000-2001 http://www.entuk.org/audits/reporttonsillectomysurvey_pdf

> "[…] the soft tissues of the body grow to their genetic size, even when the bony structures do not. The skin, the tongue, the tonsils and the nasal tissues grow to their genetic size but when the nutrition is missing, the bony structures are compromised. So the face will have an excess of skin and musculature, the tongue and tonsils will be too large for the mouth […]."[14]

In modern times, the primary reason for the hundreds of thousands of tonsillectomies performed each year is blockage of the airway.[15] If Dr. Silkman is correct, these tonsillectomies will continue to treat the symptom (the enlarged tonsils) instead of the cause (environmental pollution, lack of exercise and malnutrition) by removing a part of the patients' already compromised immune system. This not only exposes the patient to unnecessary risk, but will likely negatively impact the body's ability to deal with the factors that caused the problem in the first place.

Since this paper focuses on the scientific merits and demerits of vaccination, one additional example is sufficient to illustrate the harmful role that the all-but-universal acceptance of the evolutionary hypothesis has had in preventing an objective evaluation of the scientific basis for vaccination. Our second example involves the human appendix.

## *The Vermiform Appendix: Useless Appendage or Vital Organ of the Immune System?*

Darwin held that the appendix was vestigial because it was small in comparison with the caecum[*] of monkeys. This smallness was represented as evidence that in the course of man's evolution the need for the caecum had diminished as his diet had changed; the result was that the caecum and the appendix (or caecal appendage) had grown smaller in man through "disuse."[16] Acceptance of the evolutionary hypothesis by most biologists and medical researchers ensured that the actual function of the appendix in humans remained obscure for over a century after *Origin of Species*.[17]

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[14] Silkman R. Is it Mental or is it Dental? Cranial & Dental Impacts on Total Health. http://www.westonaprice.org/healthissues/facial-development.html Accessed 08 March 2009.

[15] Mayo Clinic. Tonsillectomy. 2010 Nov 10. www.mayoclinic.org/tests-procedures/tonsillectomy/about/pac-20395141. Accessed 2020 Nov 14.

[*] The caecum is a small pouch connected to the junction of the small and large intestines.

[16] Darwin C. *The Descent of Man*. 2nd ed. 1874, chap. 1, http://bibliotecadigital.puc-campinas.edu.br/services/e-books/Charles%20Darwin-1.pdf (accessed 4-22-20).

However, in the 1960's, experimental evidence demonstrated that the appendix actually serves as a centre for antibody-producing cells.[18] By 1976, experimental knowledge of the appendix "evolved" to the point that a medical textbook on gastroenterology noted the following:

> The appendix is not generally credited with significant function; however, current evidence tends to involve it in the immunologic mechanism.[19]

Further research demonstrated that the appendix is part of the Gut Associated Lymphoid Tissue system (or G.A.L.T.) which produces several kinds of antibodies: IgA immunoglobulins, which help to protect the bloodstream from infection from the contents of the bowel, and IgM and IgG immunoglobulins, which combat infections in the bloodstream.[20] In 1995, a textbook on anatomy and physiology stated categorically that:

> The mucosa and submucosa of the appendix are dominated by lymphoid nodules, and its primary function is as an organ of the lymphatic system.[21]

It is now recognized that the lymphoid nodules appear in the appendix roughly two weeks after birth, which coincides with the colonization of the bowel with bacteria.[22] We also now know that there is an important interplay between the appendix and the microbiome, and that its impact on health is much more complex than was first realized.[23]

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[17] Perkel A, Needleman MH: *Biology for All*. New York: Barnes and Noble, 1950, p. 129.

[18] https://creation.com/the-human-vermiform-appendix (accessed 4-22-20)

[19] McHardy G: chap. "The Appendix". In: Bockus HL. (ed.): *Gastroenterology* 1976; 2: 1134-1148.

[20] Glover JW. The human vermiform appendix. *Journal of Creation* (formerly TJ) 1998 April; 3(1):31–38 https://creation.com/the-human-vermiform-appendix Accessed 22 April 2020.

[21] Martini FH.: *Fundamentals of Anatomy and Physiology.* Englewood Cliffs, NJ: Prentice Hall, 1995, p. 916.

[22] Glover JW. The human vermiform appendix. *Journal of Creation* (formerly TJ) 1998 April; 3(1):31–38 https://creation.com/the-human-vermiform-appendix Accessed 22 April 2020.

[23] Guinane CM, Tadrous A, Fouhy F, et al. Microbial composition of human appendices from patients following appendectomy. *mBio*. 2013;4(1):e00366-12. Published 2013 Jan 15. doi:10.1128/mBio.00366-12

In spite of the overwhelming evidence for the functionality of the appendix, 150 years after *Origin of Species*, Darwin's dim view of the organ continues to be upheld by respected information sources. For example, as late as 2009, a visitor to the British Broadcasting Corporation's "Science and Nature Home Page" could still read the following description of the appendix:

> The appendix has no known function in humans. Evidence suggests that our evolutionary ancestors used their appendixes to digest tough food like tree bark, but we don't use ours in digestion now. Some scientists believe that the appendix will disappear from the human body.[24]

The extraordinary ignorance of this statement shows how much faith in the evolutionary hypothesis continues to influence leaders in the field of public information, even when the facts contradict their presuppositions. On another note, the statement also reflects the degree to which the conventional wisdom pins the blame for diseases of the appendix squarely on the "vestigial" and defective nature of the organ itself, without even considering the possibility that these diseases could be symptomatic of deeper disorders.

By conducting an extensive study of non-modernized societies all over the world, Dr. Weston Price found that appendicitis was virtually non-existent in those who retained their traditional diet and way of life. Typical was the testimony of Dr. Romig who lived among the non-modernized Eskimos of Alaska and who stated that:

> in his thirty-six years of contact with these people he had never seen a case of malignant disease among the truly primitive Eskimos and Indians, although it frequently occurs when they become modernized. He found, similarly, that the acute surgical problems requiring operation on internal organs, such as the gall bladder, kidney, stomach and appendix, do not tend to occur among the primitives but are very common problems among the modernized Eskimos and Indians.[25]

By blaming diseases of the appendix on the "defective condition" of a "vestigial organ," the evolutionary framework has helped to discourage researchers from following the traditional approach of Western natural science and medical research. This approach looked for the causes of human disease in the defective diet, habits, or environment of their patients rather than in some intrinsic defect of the body or of its component parts. By blaming diseases of a vestigial appendix on evolutionary factors, generations of scientists have lost their incentive to ask why these diseases did not exist among non-industrialized societies and to seek to prevent them through constructive changes in diet and life-style rather than by treating the symptoms of the disease through surgical removal. This idea of alternative ways of dealing with disease symptoms will be addressed again at the close of this work, as it plays an important role in decision-making regarding vaccination.

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[24] British Broadcasting Corporation. Science and Nature Home Page, "Science: Human Body and Mind" http://www.bbc.co.uk/science/humanbody/body/factfiles/appendix/appendix.shtml Accessed 11 December 2020.

[25] Price WA. *Nutrition and Physical Degeneration*, La Mesa, 2000, p. 91.
For more information on this hypothesis, see: Burkitt DP. The Aetiology of Appendicitis. *British Journal of Surgery,* 1971; 58(9) 695-699.

## *The Brilliant Blindness of Evolution-Based Medicine*

Mainstream medicine's approach to the tonsils and the vermiform appendix suffice to demonstrate that brilliant scientists and medical researchers go astray when they embrace the naturalistic evolutionary framework. The framework was the primary reason that generations of brilliant researchers failed to investigate the vital role of the tonsils and the appendix in the immune system. The current global trend to seek a vaccine for every contagious disease—while weakening the overall strength and integrity of the body's immune system through the introduction of disease agents and toxins directly into the bloodstream—represents an intensification of the application of the errors of this framework to the treatment of disease. The falsification of the myth of vestigial organs and their role in disease pathology ought to serve as a warning that the global promotion of vaccination as a key to eradicating disease needs to be re-evaluated. It also ought to inspire a return to the Creation-Providence framework of St. Albert the Great, Sir William Harvey, and the great scientific and medical researchers of the pre-Enlightenment period.

*[The text continues with an examination of vaccines, and a thorough assessment of their safety and the moral and ethical issues that accompany current vaccination policy.]*

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**Other suggested reading:**

Humphries S & Bystrianyk, R., *Dissolving Illusions—Disease, Vaccines and the Forgotten History*, www.dissolvingillusions.com (2015) [from Amazon].

Engelbrecht, Köhnlein, Bailey & Scoglio, *Virus Mania*, Trafford Publishing (3rd English edn. 2021)

Axe, Briggs & Richards, *The Price of Panic*, Regnery Publishing (2020). *[Ed.]*

# ABBOT MENDEL: A NEW OUTLOOK IN HEREDITY

### James J. Walsh, M.D., PhD., LLD.

From *Catholic Churchmen in Science* (1906) [Part II of two]

While Mendel was beginning his experiments almost absolutely under the guidance of his own scientific spirit, and undertaking his series of observations in the monastery garden without any reference to other work in this line, he knew very well what distinguished botanists were doing in this line and was by no means presumptuously following a study of the deepest of nature's problems without knowing what others had accomplished in the matter in recent years. In the second paragraph of his introduction he quotes the men whose work in this science was attracting attention, and says that to this object numerous careful observers, such as Kolreuter, Gärtner, Herbert, Lecoq, Wichura and others, had devoted a part of their lives with inexhaustible perseverance.

To quote Mendel's own words:—

> Gärtner, especially in his work, "Die Bastarderzeugung im Pflanzenreiche," has recorded very valuable observations; and quite recently Wichura published the results of some profound observations on the hybrids of the willow. That so far no generally applicable law governing the formation and development of hybrids has been successfully formulated can hardly be wondered at by anyone who is acquainted with the extent of the task and can appreciate the difficulties with which experiments of this class have to contend. A final decision can only be arrived at when we shall have before us the results of the changed detailed experiments made on plants belonging to the most diverse orders. It requires some courage indeed to undertake a labor of such far-reaching extent; it appears, however, to be the only right way by which we can finally reach the solution of a question the importance of which cannot be overestimated in connexion with the history of the evolution of organic forms.
>
> The paper now presented records the results of such a detailed experiment. This experiment was practically confined to a small plant group, and is now after eight years' pursuit concluded in all essentials. Whether the plan upon which the separate experiments were conducted and carried out was the best suited to attain the desired end is left to the friendly decision of the reader.

Mendel's discoveries with regard to peas and the influence of heredity on them, were founded on very simple, but very interesting, observations. He found that if peas of different colors were taken, that is to say, if, for instance, yellow-colored peas were crossed with green, the resulting pea seeds were, in the great majority of cases, of yellow color. If the yellow-colored peas obtained from such crossing were planted and allowed to be fertilized only by pollen from plants raised from similar seeds, the succeeding generation, however, did not give all yellow peas, but a definite number of yellow and a definite number of green. In other words, while there might have been expected a permanence of the yellow color, there was really a reversion in a number of the plants apparently to the type of the grandparent. Mendel tried the same experiment with seeds of different shape. Certain peas are rounded and certain others are wrinkled. When these were crossed, the next generation consisted of wrinkled peas, but the next succeeding generation presented a definite number of round peas besides the wrinkled ones, and so on as before. He next bred peas with regard to other single qualities, such as the color of the seed coat, the inflation or constriction of the pod, as to the coloring of the pod, as to the distribution of the flowers along the stem, as to the length of the stem, finding always, no matter what the quality tested, the laws of heredity he had formulated always held true.

What he thus discovered he formulated somewhat as follows: In the case of each of the crosses the hybrid character, that is, the quality of the resultant seed, resembles one of the parental forms so closely that the other escapes observation completely or cannot be detected with certainty. This quality thus impressed on the next generation, Mendel called the dominant quality. As, however, the reversion of a definite proportion of the peas in the third generation to that quality of the original parent which did not appear in the second generation was found to occur, thus showing that, though it cannot be detected, it is present, Mendel called it the recessive quality. He did not find transitional forms in any of his experiments, but constantly observed that when plants were bred with regard to two special qualities, one of those qualities became dominant in the resultant hybrid, and the other became recessive, that is, present though latent and ready to produce its effects upon a definite proportion of the succeeding generation.

Remembering, then, that Mendel means by hybrid the result of the crossing of two distinct species, his significant discovery has been stated thus: The hybrid, whatever its own character, produces ripe germ cells, which bear only the pure character of one parent or the other. Thus, when one parent has the character "A," in peas, for example, a green color, and the other the character" B," in peas once more a yellow color, the hybrid will have in cases of simple dominance the character "AB" or "BA," but with the second quality in either case not noticeable. Whatever the character of the hybrid may be, that is to say, to revert to the example of the peas, whether it be green or yellow, its germ cells when mature will bear either the character "A" (green), or the character "B" (yellow), but not both. [1]

As Professor Castle says: “This perfectly simple principle is known as the law of segregation, or the law of the purity of the germ cells. It bids fair to prove as fundamental to a right understanding of the facts of heredity as is the law of definite proportions in chemistry. From it follow many important consequences.”

To follow this acute observer’s work still further—by letting the crossbreds fertilize themselves, Mendel raised a third generation. In this generation were individuals which showed the dominant character and also individuals which presented the recessive character. Such an observation had of course been made in a good many instances before.

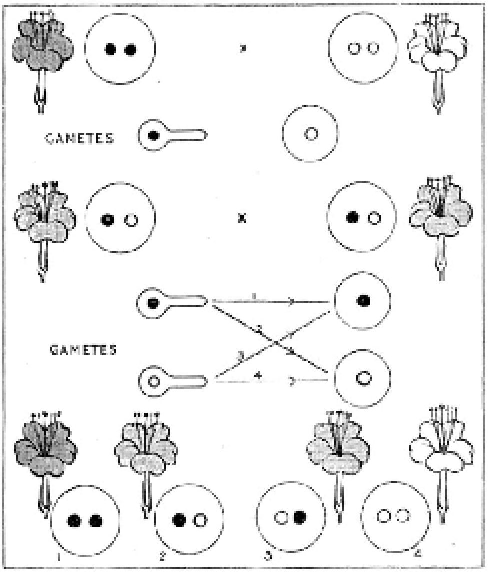

*Fig. 170. The Mendelian explanation of the breeding behaviour of Four-o'clocks.*

*A white flower with two "white" genes in each nucleus (upper right) is pollinated by a red with two "red" genes (upper left). The resulting generation (middle row) have one gene of each kind and are therefore pink. When these fertilize each other, reds, pinks and whites are produced (below) as explained in the text.*

Mendelian inheritance in *Mirabilis jalapa*

But Mendel noted—and this is the essence of the new discovery in his observations—that in this third generation the numerical proportion of dominants to recessives is in the average of a series of cases approximately constant—being, in fact, as three to one. With almost absolute regularity this proportion was maintained in every case of crossing of pairs of characters, quite opposed to one another, in his pea plants. In the first generation, raised from his crossbreds, or, as he calls them, hybrids, there were seventy-five per cent dominants and twenty-five per cent recessives.

When these plants were again self-fertilized and the offspring of each plant separately sown, a new surprise awaited the observer. The progeny of the recessives remained pure recessive; and in any number of subsequent generations never produced the dominant type again, that is, never reverted to the original parent, whose qualities had failed to appear in the second generation. When the seeds obtained by self-fertilizing the plants with the dominant characteristics were sown, it was found by the test of progeny that the dominants were not all of like nature, but consisted of two classes—first, some which gave rise to pure dominants; and secondly, others which gave a mixed offspring, composed partly of recessives, partly of dominants. Once more, however, the ratio of heredity asserted itself and it was found that the average numerical proportions were constant—those with pure dominant offspring being to those with mixed offspring as one to two. Hence, it was seen that the seventy-five per cent of dominants are not really of identical constitution, but consist of twenty-five per cent which are pure dominants and fifty per cent which are really crossbreds, though like most of the crossbreds raised by crossing the two original varieties, they exhibit the dominant character only.

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[1] Diagram from *The Science of Life*, Wells H., Huxley J, Wells G., Cassell (1931), p.293 *[Ed.]*

These fifty crossbreds have mixed offspring; these offspring again in their numerical proportion follow the same law, namely, three dominants to one recessive. The recessives are pure like those of the last generation, but the dominants can, by further self-fertilization and cultivation of the seeds produced, be again shown to be made up of pure dominant and crossbreds in the same proportion of one dominant to two crossbreds.

The process of breaking up into the parent forms is thus continued in each successive generation, the same numerical laws being followed so far as observation has gone. As Mendel's observations have now been confirmed by workers in many parts of the world, investigating many different kinds of plants, it would seem that this law which he discovered has a basis in the nature of things and is to furnish the foundation for a new and scientific theory of heredity, while at the same time affording scope for the collection of observations of the most valuable character with a definite purpose and without any theoretic bias.

The task of the practical breeder who seeks to establish or fix a new variety produced by cross-breeding in a case involving two variable characters is simply the isolation and propagation of that one in each sixteen of the second generation offspring which will be pure as regards the desired combination of characters. Mendel's discovery, by putting the breeder in possession of this information enables him to attack this problem systematically with confidence in the outcome, whereas hitherto his work, important and fascinating as it is, has consisted largely of groping for a treasure in the dark. The greater the number of separately variable characters involved in a cross, the greater will be the number of new combinations obtainable; the greater too will be the number of individuals which it will be necessary to raise in order to secure all the possible combinations; and the greater again will be the difficulty of isolating the pure, that is, the stable forms in such as are similar to them in appearance, but still hybrid in one or more characters.

The law of Mendel reduces to an exact science the art of breeding in the case most carefully studied by him, that of entire dominance. It gives to the breeder a new conception of "purity." No animal or plant is "pure," simply because it is descended from a long line of ancestors, possessing a desired combination of characters; but any animal or plant is pure if it produces gametes —that is, particles for conjugation of only one sort—even though its grandparents may among themselves have possessed opposite characters. The existence of purity can be established with certainty only by suitable breeding tests, especially by crossing with recessives; but it may be safely assumed for any animal or plant, descended from parents which were like each other and had been shown by breeding tests to be pure.

This naturally leads us to what some biologists have considered to be the most important part of his work—the theory which he elaborated to explain his results, the principle which he considers to be the basis of the laws he discovered. Mendel suggests as following logically from the results of his experiments and observations a certain theory of the constitution of germinal particles. He has put this important matter so clearly himself and with such little waste of words that it seems better to quote the translation of the passage as given by Professor Bateson, than to attempt to explain it in other words. Mendel says:—

> The results of the previously described experiments induced further experiments, the results of which appear fitted to afford some conclusions as regards the composition of the egg and pollen-cells of hybrids. An important matter for consideration is afforded in peas (pisum) by the circumstance that among the progeny of the hybrids constant forms appear, and that this occurs, too, in all combinations of the associated characters. So far as experience goes, we find it in every case confirmed that constant progeny can only be formed when the egg-cells and the fertilizing pollen are of like character, so that both are provided with the material for creating quite similar individuals, as is the case with the normal fertilization of pure species.
>
> We must therefore regard it as essential that exactly similar factors are at work also in the production of the constant forms in the hybrid plants. Since the various constant forms are produced in one plant, or even in one flower of a plant, the conclusion appears logical that in the ovaries of the hybrids there are formed as

> many sorts of egg-cells and in the anthers as many sorts of pollen-cells as there are possible constant combination forms, and that these egg and pollen-cells agree in their internal composition with those of the separate forms.
>
> In point of fact, it is possible to demonstrate theoretically that this hypothesis would fully suffice to account for the development of the hybrids in the separate generations, if we might at the same time assume that the various kinds of egg and pollen-cells were formed in the hybrids on the average in equal numbers.

Bateson says in a note on this passage that this last and the preceding paragraph contain the essence of the Mendelian principles of heredity. Mendel himself, after stating this hypothesis, gives the details of a series of experiments by which he was able to decide that the theoretic considerations suggested were founded in the nature of plants and their germinal cells.

It will, of course, be interesting to realize what the bearing of Mendel's discoveries is on the question of the stability of species as well as on the origin of species. Professor Morgan, in his article on Darwinism in the "Light of Modern Criticism," already quoted, says the important fact (with regard to Mendel's Law) from the point of view of the theory of evolution is that "the new species have sprung fully armed from the old ones, like Minerva from the head of Jove." "From de Vries's results," he adds, "we understand better how it is that we do not see new forms arising, because they appear, as it were, fully equipped over night. Old species are not slowly changed into new ones, but a shaking up of the old organization takes place and the egg brings forth a new species. It is like the turning of the kaleidoscope, a slight shift and the new figure suddenly appears. It needs no great penetration to see that this point of view is entirely different from the conception of the formation of new species by accumulating individual variations, until they are carried so far that the new form may be called a new species."

With regard to this question of the transformation of one species into another, Mendel himself, in the concluding paragraphs of his article on hybridization, seems to agree with the expressions of Morgan. He quotes Gärtner's opinion with apparent approval: "Gärtner, by the results of these transformation experiments was led to oppose the opinion of those naturalists who dispute the stability of plant species and believe in a continuous evolution of vegetation. He perceives in the complete transformation of one species into another an indubitable proof that species are fixed within limits beyond which they cannot change." "Although this opinion," adds Mendel, "cannot be unconditionally accepted, we find, on the other hand, in Gärtner's experiments a noteworthy confirmation of that supposition regarding the variability of cultivated plants which has already been expressed." This expression of opinion is not very definite, and Bateson, in what Professor Wilson of Columbia calls his "recent admirable little book on Mendel's principles," adds the following note that may prove of service in elucidating Mendel's meaning, as few men have entered so fully into the understanding of Mendel's work as Bateson, who introduced him to the English-speaking scientific public, "The argument of this paragraph appears to be that though the general mutability of natural species might be doubtful, yet among cultivated plants the transference of characters may be accomplished and may occur by integral steps [italics ours] , until one species is definitely 'transformed' into the other."

Needless to say, this is quite different from the gradual transformation of species that Darwinism or Lamarckism assumes to take place. One species becomes another per saltum in virtue of some special energy infused into it, some original tendency of its intrinsic nature, not because of gradual modification by forces outside of the organisms, nor because of the combination of influences they are subjected to from without and within, because of tendency to evolute plus environmental forces. This throws biology back to the permanency of species in themselves, though successive generations may be of different species, and does away with the idea of missing links, since there are no gradual connecting gradations.

A very interesting phase of Mendel's discoveries is concerned with the relative value of the egg-cell and the pollen-cell, as regards their effect upon future generations. It is an old and oft-discussed problem as to which of these germinal particles is the more important in its influence upon the transmission of parental qualities. Mendel's observations would seem to decide definitely that, in plants and, by implication, in animals, since the germinal process is biogenetically similar, the value of both germinal particles is exactly equal.

In a note, Mendel says:-

> *In pisum* (i.e. in peas), it is beyond doubt that, for the formation of the new embryo, a perfect union of the elements of both fertilizing cells must take place. How could we otherwise explain that, among the offspring of the hybrids, both original types reappear in equal numbers, and with all their peculiarities? If the influence of the egg-cell upon the pollen-cell were only external, if it fulfilled the role of a nurse only, then the result of each artificial fertilization could be no other than that the developed hybrid should exactly resemble the pollen parent, or, at any rate, do so very closely. These experiments, so far, have in no wise been confirmed. An evident proof of the complete union of the contents of both cells is afforded by the experience gained on all sides, that it is immaterial as regards the form of the hybrid which of the original species is the seed cell, or which the pollen parent!

This is the first actual demonstration of the equivalent value of both germinal particles as regards their influence on transmission inheritance in future generations.

It is only by simplifying the problem so that all disturbing factors could be eliminated that Mendel succeeded in making this demonstration. Too many qualities have hitherto been considered with consequent confusion as to the results obtained.

It is of the genius of the man that he should have been able to succeed in seeing the problem in simple terms while it is apparently so complex, and thus obtain results that are as far-reaching as the problem they solve is basic in its character.

Bateson, in his work, "Mendel's Principles of Heredity," says:—

> It may seem surprising that a work of such importance should so long have failed to find recognition and to become current in the world of science. It is true that the Journal in which it appeared is scarce, but this circumstance has seldom long delayed general recognition. The cause is unquestionably to be found in that neglect of the experimental study of the problem of species which supervened on the general acceptance of the Darwinian doctrine. The problem of species, as Kölreuter, Gärtner, Naudin, Wichura, and the hybridists of the middle of the nineteenth century conceived it, attracted thenceforth no workers.
>
> The question, it was imagined, had been answered and the debate ended. No one felt much interest in the matter. A host of other lines of work was suddenly opened up, and in 1865 the more original investigators naturally found these new methods of research more attractive than the tedious observations of hybridizers, whose inquiries were supposed, moreover, to have led to no definite results.
>
> In 1868 appeared the first edition of Darwin's "Animals and Plants," marking the very zenith of these studies with regard to hybrids and the questions in heredity which they illustrate, and thenceforth the decline in the experimental investigation of evolution and the problem of species have been studied. With the re-discovery and confirmation of Mendel's work by de Vries, Correns and Tschermak in 1900 a new era begins. Had Mendel's work come into the hands of Darwin it is not too much to say that the history of the development of evolutionary philosophy would have been very different from that which we have witnessed.
>
> That Mendel's work, appearing as it did at a moment when several naturalists of the first rank were still occupied with these problems, should have passed wholly unnoted, will always remain inexplicable, the more so as the Brünn society exchanged its publication with most of the great academies of Europe, including both the Royal and the Linnean societies of London.

The whole history of Mendel’s work, its long period without effect upon scientific thought, its thoroughly simple yet satisfactory character, its basis in manifold observations of problems simplified to the last degree, and its present complete acceptance illustrate very well the chief defect of the last two generations of workers in biology. There has been entirely too much theorizing, too much effort at observations for the purpose of bolstering up preconceived ideas—preaccepted dogmas of science that have proved false in the end—and too little straightforward observation and simple reporting of the facts without trying to have them fit into any theory prematurely, that is until their true place was found. This will be the criterion by which the latter half of nineteenth century biology will be judged; and because of failure here much of our supposed progress will have no effect on the current of biological progress, but will represent only an eddy in which there was no end of bustling movement manifest but no real advance.

As stated very clearly by Professor Morgan at the beginning of this paper, and Professor Bateson near the end, Darwin’s doctrine of natural selection as the main factor in evolution and its practically universal premature acceptance by scientific workers in biology are undoubtedly responsible for this. The present generation may well be warned, then, not to surrender their judgment to taking theories, but to wait in patience for the facts in the case, working, not theorizing, while they wait.

These words conclude Prof. Walsh’s book of “sketches of the lives of clergymen who were great scientists.” In the Preface he writes:

> “They all range themselves naturally around the central idea that the submission of the human reason to Christian belief, and of the mind and heart to the authority of the church, is quite compatible with original thinking of the highest order, and with that absolute freedom of investigation into physical science, which has only too often been said to be quite impossible to churchmen.”

| **Other extracts taken from the same book:** | *Daylight No.* |
|---|---|
| The Supposed Opposition of Science and Religion | 47 |
| Father Kircher, SJ, Scientist, Orientalist and Collector | 53 & 54 |
| Bishop Stensen: Anatomist and Father of Geology | 55 & 56 |
| Copernicus and his Times | 62 & 63 |

# THE INFLUENCE OF EVOLUTION ON NAZISM & COMMUNISM [1]

### Gerard J. Keane

The British economist E. F. Schumacher [1911-1977], known for his best-seller *Small is Beautiful*, was greatly concerned about the influence of Evolutionism upon society. In his book *A Guide for the Perplexed* he wrote:

> The Doctrine of Evolutionism is generally presented in a manner that betrays, and offends against, all principles of scientific probity. It starts with the explanation of changes in living beings; but without warning, as it were, it suddenly purports to explain not only the development of consciousness, self-awareness, language and social institutions but also the origin of life itself…
>
> Evolutionism, purporting to explain all and everything solely and exclusively by natural selection for adaptation and survival, is the most extreme product of the materialistic utilitarianism of the nineteenth century. *The inability of 20th century though to rid itself of this imposture is a failure that may well cause the collapse of Western civilization.* For it is impossible for any civilization to survive without a faith in meanings and values transcending the utilitarianism of comfort and survival—in other words, without a religious faith. [2]

Schumacher believed the evolutionists' reasoning represented a philosophical error of the most disastrous consequences. Were his fears justified?

Evolutionism has had a profound influence on various belief systems and upon man's thinking. For the Christian, there is every reason to believe that the whole notion of Evolution is one which Satan has used to bring about confusion, in an effort to turn mankind away from God. Satan seeks subtly to change one's intention from that of conformity with the laws of God, and thereby from growth in faith, to that of conforming increasingly to the spirit prevailing in the world. The idea of using Evolution Theory to achieve this purpose, by supposedly doing away with the need for God, seems brilliant, though it is erroneous.

Widespread acceptance of Evolution Theory has greatly influenced the moral standards of mankind. If atheistic Evolution is true, then "anything goes"—nudity, pornography, incest, abortion, homosexuality and so on. There can be no objective criteria for right or wrong, or for desirable or undesirable patterns of living, or for codes of law.

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[1] From *Creation Rediscovered – Evolution and the Importance of the Origins Debate*, TAN Books, (2nd Edn. 1999), pp 42, 43, 281-287. [Illustrations from www.fotolia.com, added by Ed.]

[2] E.F. Schumacher, *A Guide for the Perplexed* (London: Sphere Books Limited, 1978 Abacus Edition), pp.130,133. Emphasis added.

The Christian view is that the basic dignity of each human being derives from the fact that each one has a rational soul, made in the image of God. Each human being is destined for eternal existence and is not simply an animal which ceases to exist upon death. Both body and soul constitute the person, but because the soul persists as the body changes, it is possible to describe the soul as the "form," or the essence of the human person. Each human being therefore has a right to knowledge of his ultimate supernatural destiny and of the fact that God, the Creator of all things, is an authority greater than man.

The idea of man as simply an evolving creature, the highest of the animals, must inevitably lead to the devaluation of the individual's fundamental rights. In many parts of the world, the rights of the individual have come to be regarded as secondary to those of the state. In "modern" societies, the very right to life itself is simply denied to pre-born human beings if abortion is desired by the mother. The widespread "blindness" throughout modern societies that regards unborn human children as less than fully human is largely attributable to pro-Evolution conditioning over many years. In most liberal democratic societies, consensus pluralism has replaced obedience to the laws of God. The Kingship of Christ is understood by relatively few, let alone considered seriously as the ideal governing philosophy of society.

As belief in Evolution Theory became ever more popular from the late 19th century onwards, the growth of evil belief systems was effectively facilitated and new possibilities emerged for theological errors to spread throughout Christianity.

Many people would be generally aware of the ruthless use to which Social Darwinism was put by unscrupulous capitalists during the 19th century era of *laissez faire* capitalism, when vast fortunes were amassed at the human expense of many workers who lived and worked in deplorable conditions. But how many appreciate the extent to which Evolution Theory has been central to various belief systems and has had a major influence within Christianity?

The appeal of powerful totalitarian belief systems in the 20th century owes much to the acceptance of Evolution as the explanation of man's existence, an acceptance that allowed evil ideas to be formulated in terms that can appeal to human reason. Take away Evolution Theory from Nazism, Communism and Secular Humanism, and these belief systems effectively lose a central premise necessary for coherence. Similarly, if Evolution Theory did not exist, the liberal theology called “Modernism” would have no scientific foundation for its revisionist propositions.[3]

To assert all this is not to blame Evolution Theory for the inhuman and degrading acts carried out by totalitarian forces, but rather to place the impact made by Evolution Theory in its proper context—in other words, to give it due recognition as an important causal influence allowing these “isms” to be born and grow. It will be argued that Evolution Theory is not incidental, but rather, is essential to the above belief systems.

## NAZISM AND COMMUNISM

The 20th century has seen the rise to power in many countries of despotic systems of government which have wielded almost total control over the population. Few despotic forces in history can compare with the infamous totalitarian belief systems known as Nazism and Communism. The rhetoric used to idealize each belief system promised a better world for its peoples, Nazism placing great stress upon the leader principle and Communism upon the dictatorship of the proletariat. The power system imposed in these countries was almost invariably nothing less than brutal dictatorship, usually with an obsessive personality cult of the leader and grinding oppression of the population.

Curiously, the two systems had much in common. Nazi Germany and the USSR even made a joint peace pact at the outset of World War II. When Hitler invaded Russia, however, he unwittingly set in motion the unlamented defeat of Nazism and effectively opened the way for Stalin to occupy much of Eastern Europe and impose Communist ideology on those countries.

The pro-democratic revolution which swept Eastern Europe and the USSR in the late 1980s was bewildering, and one hopes that enlightened leadership will emerge amidst the turmoil of each country and that other countries will throw off the yoke of Communism. In the West, the many intellectuals who consistently failed to grasp the reality of Marxism-Leninism in practice and idealized the theoretical model of pure Marxism are now seen as having little credibility.

In different ways, both Nazism and Communism owe much to Evolutionism.

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[3] Modernism holds, among other tenets, that truth is relative to what the people of various generations perceive it to be. Modernism is a heresy condemned by Pope St. Pius X, 1903-1914, yet which re-emerged after Vatican Council II (1962-1965).

Evolution was a powerful influence on the mindset which dominated the attitude of party leaders, and thus it helped to rationalize the brutal treatment of individuals.

## Nazism ("National" Socialism)

In the decades preceding the reign of Hitler, anti-Semitism in Europe had developed to a high degree and was rationalized in religious, socio-political and biological arguments. During his youth, Hitler imbibed a fanatical hatred of the Jews and understood clearly the concept of Social Darwinism.

Based on theories of biological Evolution and natural selection, Social Darwinism held that the "survival of the fittest" applied in nature not only regarding individuals, but also in the struggle between races and nations. Those groups that were hostile to the State or were biologically inferior would have to perish if the nation were to survive.

Such ideas helped to shape the policies of the Third Reich. In pursuit of his perverted vision of eugenics and an Aryan master race, Hitler and his Nazi colleagues implemented the racist ideas of Social Darwinism, and this culminated in the "final solution"—the well-organized plan to exterminate millions of Jews, Slavs, the mentally demented and other so-called inferior types.

The idea of racism as a general philosophy strongly implies that there are distinct races upon the Earth, some regarded as inherently superior to others, who have evolved from different members of a common hominid ancestry.

In a key analysis of the Nazi dictatorship, Karl Dietrich Bracher noted the rationale of Social Darwinism across pre-World War II Europe:

> The underlying idea was that, in the course of a ruthless competition and battle, a "natural" selection takes place which prevents or offsets aberrations and makes for a proper balance between population and available resources. In society, education and penal law serve as the instruments of this process of selection; according to the immutable laws of heredity, the unfit cannot be educated and therefore must be eliminated . . . . The teachings of Social Darwinism were in contradiction to the egalitarian belief in an open, mobile society and the educability of man—the basis of the democratic idea of state and society. The humanitarian idea of evolution was replaced by the concept of the planned "breeding" of an elite and the proscription of intermarriage. . . . Social Darwinism remained a sectarian philosophy; seeing

> man only as a biological and not a thinking, moral being, it misjudged the nature of historical and social forces, the binding values of civilization, as well as the basic differences between biological and social selection. [4]

In translating the concept of Social Darwinism into grim reality, Hitler appears to have been influenced by the ideas advanced in the late 19th century by Frederick Nietzsche. [5] This German thinker had contended that, just as man had evolved from an ape-like ancestor, so a higher type "superman" would in time emerge—one who would be quite ruthless in exercising power over the weak. Some idea of the mentality of the Nazi leadership can be gauged from the remarks of Heinrich Himmler, made during World War II to SS leaders:

> The SS man is to be guided by one principle alone: honesty, decency, loyalty and friendship towards those of our blood, and to no one else. What happens to the Russians or the Czechs is a matter of total indifference to me. If good blood of our type is to be found among the [other] nations, we will take it, if need be by taking their children and bringing them up ourselves. Whether other peoples live in plenty or starve to death interests me only insofar as we need them as slaves for our culture; for the rest it does not interest me.[6]

Bracher also pointed out that the extermination mentality of the Nazis grew out of the biological insanity of Nazi ideology. The extermination plan was handled by a completely impersonal bureaucracy which regarded its victims as a species of inferior subhumans. Himmler regarded them as vermin, as though he were handling a biological disease.

That Social Darwinism could be put into such gruesome practice by the Nazis can in no way be blamed personally on Charles Darwin and his colleagues. However, it must be recognized that unquestioning belief in Evolution Theory was a central feature of the Nazi belief system-and not just incidental to it.

## Communism ("Democratic" Socialism)

The central doctrine of Communism is the theory of Class Struggle. This theory is explained in the concept of *dialectical materialism,* which relies heavily on Evolution as an established historical fact.

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[4] Karl Dietrich Bracher, *The German Dictatorship* (Middlesex, England: Penguin Books Ltd., Peregrine Books, 1978), pp. 28, 29.

[5] It is known that Nietzsche experienced a decisive loss of faith in Christianity in 1865, after reading *Das Leben-Jesu* (1835) by David Friedrich Strauss. Strauss was among the first German thinkers who attempted to separate the "historical" Christ from the divine Christ, and later went on to write extensively from a Social Darwinist perspective.

[6] Bracher, *The German Dictatorship,* p. 522. Nürnberger Dokumente cited.

One of the co-writers of the Communist Manifesto, Friedrich Engels, wrote a booklet entitled *The Part Played by Labor in the Transition From Ape to Man.*[7] In it he claimed that exploitation began with the evolution of the first hand, millions of years ago. This explanation was accepted as factual by Marxists, and the whole Communist credo is dependent for plausibility on Evolution Theory.

Much of the indoctrination carried out in Communist "re-education" centers (concentration camps) referred to Evolution in an effort to convince people that there is no God.

According to Communist theory, everything in existence is composed entirely of matter. Matter is supposed to encompass a unity of opposite forces, with an inbuilt conflict that makes it autodynamic and self-energizing, needing no outside force. Because of this conflict—supposedly inherent in all matter—the outcome must always be orderly development of new forms of matter. Through so-called quantitative accumulations, nature is thought to be capable of "leaps" to new and higher forms of reality, and thus a Creator is not required. In *Socialism: Utopian and Scientific,* Engels wrote about Evolution:

> Nature is the proof of dialectics, and it must be said for modern science that it has furnished this proof with very rich materials increasing daily, and thus has shown that, in the last resort, Nature works dialectically and not metaphysically; that she does not move in the eternal oneness of a perpetually recurring circle; but goes through a real historical evolution. In this connection Darwin must be named before all others. He dealt the metaphysical conception of Nature the heaviest blow by his proof that all organic beings, plants, animals, and man himself, are the products of a process of evolution going on through millions of years.[8]

According to Marxist theorists, at some stage in the evolutionary process, mankind developed consciousness and then mind emerged as an intelligent, self-knowing, self-determining entity. Because man is the highest intelligence in all existence, he can, with the development of science, come to be omniscient, to know all truth about existence.

Marx held that history was on the side of the workers. As surely as all existence had evolved to the present level, it was inevitable that the exploiting class would be destroyed. The property-owning class would assist in its own demise by reducing the working class to such poverty that a deficiency of demand would result when the workers could no longer afford to purchase the goods produced by the system.

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[7] Marx & Engels, Selected Works (Moscow, 1975), pp. 354-364.

[8] *Ibid.,* p. 407.

Once the working class had grasped the laws governing their fate and had overthrown the exploiting class, it would inaugurate a new era of socialism, and the state would wither away, as society evolved to a classless community, with no need for police or armed forces.

Man was destined to find fulfillment, said Marx, *in a new world order* in which conflict would be eliminated and socio-economic harmony at last achieved. The wars, oppressions, miseries and spiritual illusions of previous ages would dissolve into the Communist peace, which was the goal of history.

Lysenkism, or Michurinism, was a genetic philosophy based on Evolutionism. It was part of the official government policy, obligatory in teaching at all levels in the USSR and its satellite countries. The idea was that acquired traits, including those acquired by training, were heritable, and thus Evolution could be guided by the state toward a better society.

The spread of Communism brought with it immense suffering. Tens of millions of human beings (about sixty million in the USSR alone) died as victims of fanatical Communists. They were clearly regarded as nothing more than creatures who were expendable in the quest for a classless society.

As with Nazism, Evolution was essential to the Communist belief system—not just incidental to it. Without the assumption of evolutionary struggle for survival against predators, the wretched notion of Class Struggle against oppressors would have lacked plausibility.

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**Further suggested reading**:

Bergman, J., *Hitler and the Nazi Darwinian Worldview*, Joshua Press (2012)

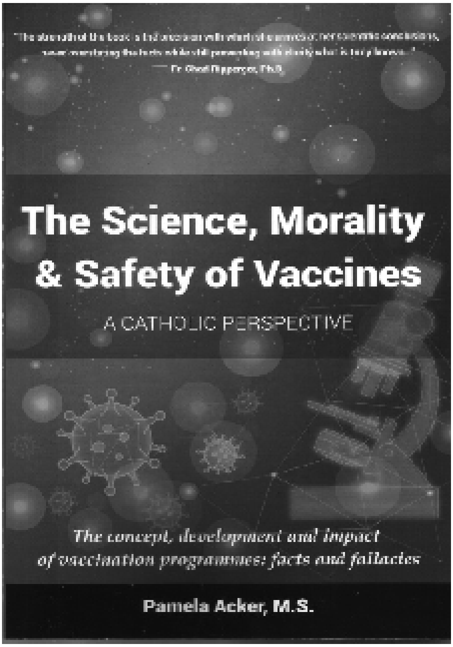
Weikart, R., *From Darwin to Hitler*, Palgrave Macmillan (2004)

Watts, N. [‘A London Journalist’], *Britain Without God*, Lutterworth Press (1935)

Sewell, D., *The Political Gene*, Picador (2009)

Nevard, A., *Hitler’s Debt to Darwin*,

[*Daylight* pamphlet in the *Spotlight* series, No. 9, 2004. Republished from article in *Daylight 29*, Autumn/Winter 1999]



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Pamela Acker holds a Master of Science degree in Biology from the Catholic University of America. She has taught natural science in a variety of settings (from middle school to college) since 2008. Prior to working as a teacher, Pamela was involved in biological research as a whole genome library maker at the Genome Sequencing Center at Washington University in Saint Louis. She has conducted research in vaccine delivery using T4 bacteriophage nanoparticles and was briefly involved in researching novel gene regulation mechanisms in *C.elegans*.

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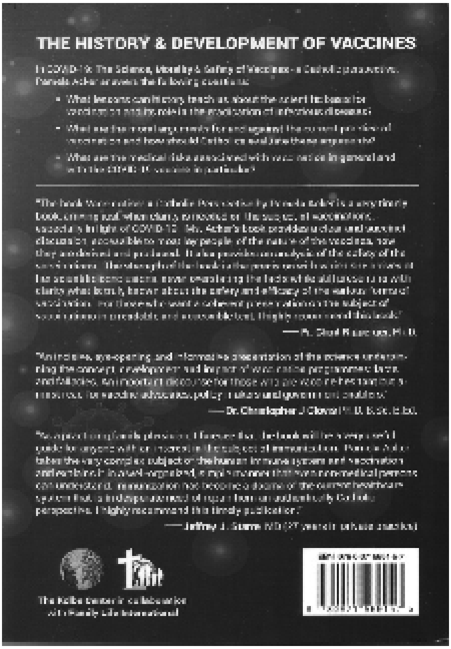
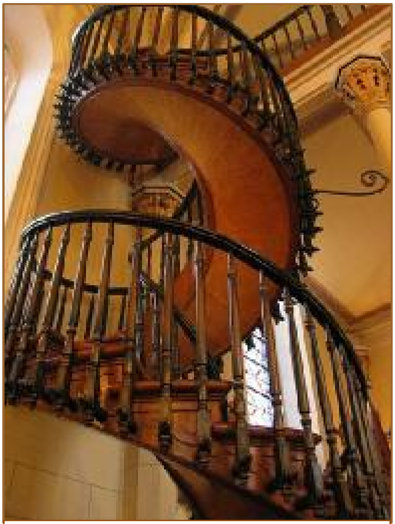


THE HISTORY & DEVELOPMENT OF VACCINES

# St Joseph's Staircase

In 1853, the Sisters of Loretto opened a school in Santa Fe, New Mexico and in 1873 they commissioned renowned architect Antoine Mouly to build them a gothic-style chapel. Unfortunately he died before creating any access to the choir loft; there was too little floor space for a conventional staircase and a ladder was not appropriate for nuns to climb. The Sisters of Loretto prayed a novena [nine days of special prayers] to St Joseph, patron of carpenters, for guidance. According to the story, on the final day, a visitor appeared carrying a few tools and claiming to be a carpenter. On learning of the community's need, he offered to build a suitable set of stairs but on condition that he must be allowed to work in private. The nuns happily agreed to this, and the man proceeded to work when the chapel was empty. The legend says that no-one ever saw him enter or leave the chapel.



*Wikipedia / creative commons*

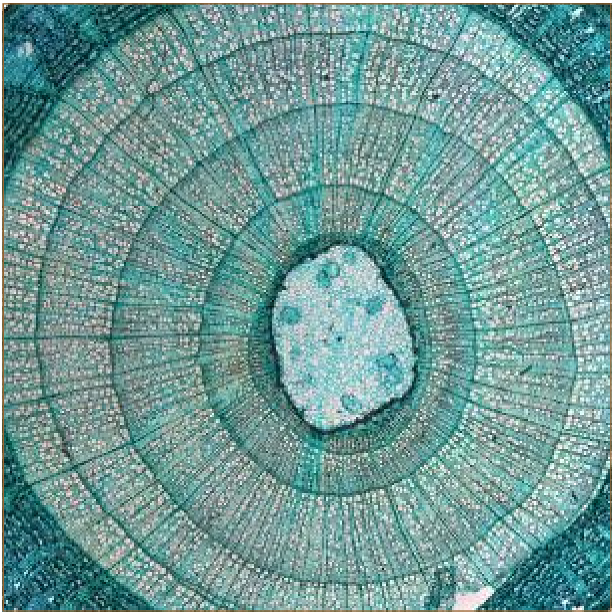
After some three months the staircase was completed and the sisters were delighted with it, but it seems that the workman, who had never identified himself and had not even been paid, was nowhere to be found. Investigation showed that the wood was not native to the area and no local lumber stores had been used for supplies. Somehow the staircase had been an answer to prayer, and it still stands today.

The helical staircase rises 20 feet and comprises two 360 degree turns with no supporting centre pole, with all its weight resting on the bottom stair. No nails or screws were used for joints, only wooden pegs and glue. The banisters were added about ten years later. The school closed in 1968 but the chapel survives as a popular wedding venue. The unidentified carpenter, mysterious origin and amazing construction of the staircase remain an intriguing wonder.

https://www.lorettochapel.com/ ; https://en.wikipedia.org/wiki/Loretto_Chapel

# Tree Rings and Dating

It can be hard to resist the compulsion, when passing the stump of a felled tree, to attempt to count the rings exposed in the trunk and determine the age of the tree. The photo shows a section of a young lime tree with four growth rings. In a temperate climate, with regular winter and summer, this should reliably indicate four years of growth. Counting and measuring tree rings is the basis of the science of **dendrochronology**. Comparisons between the concentric rings and cross-referencing with different trees has provided a technique for analyzing climate conditions in the past, calibrating radiocarbon dates, and dating archaeological material. However, though some species like the oak seem very consistent in making annual rings, others may be more erratic, perhaps showing two or more rings in a year. This could be a consequence of different growth rates and climatic conditions e.g. post-Flood, which could resolve an issue with the dating of the Bristlecone Pine, the oldest known living thing.



*Tilia* [lime] 4-y old stem T.S.

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For more discussion see Dr Don Batten [3 Feb 2006] at
**https://creation.com/tree-ring-dating-dendrochronology**

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